

STATE OF IDAHO  
DEPARTMENT OF WATER RESOURCES  
BENEFICIAL USE FIELD REPORT

**A. GENERAL INFORMATION**

Permit No: 72-16601

Exam Date: 2/23/2015

1. Current Owner: TAIT P JOHNSON  
905 ORCHID POINT WAY  
VERO BEACH FL 32963  
(435) 640-9111

2. Accompanied by: Jana Reeder, IDWR Staff

**3. SOURCE**

GROUND WATER

**TRIBUTARY****B. OVERLAP REVIEW**

1. Other water rights with the same place of use: 72-10385 (groundwater D&S) from a different well, 72-2088 (domestic) from a different source, Burnt Creek

2. Other water rights with the same point of diversion: None

**C. DIVERSION AND DELIVERY SYSTEM****1. LOCATION OF POINT(S) OF DIVERSION:**

GROUND WATER

NW1/4SE1/4

Sec. 29, Twp 11N, Rge 16E, B.M.

CUSTER County

Method of Determination: Site visit and GPS of well head

2.

**PLACE OF USE:** DOMESTIC

| Twp Rge Sec | NE |    |    |    | NW |    |    |    | SW |    |    |    | SE |    |    |    | Totals |
|-------------|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|--------|
| 11N 16E 29  | NE | NW | SW | SE | NE | NW | SW | SE | NE | NW | SW | SE | NE | NW | SW | SE |        |
|             |    |    | X  |    |    |    |    |    |    |    |    |    |    | X  |    |    |        |

**PLACE OF USE:** IRRIGATION

| Twp Rge Sec | NE |    |    |    | NW |    |    |    | SW |    |    |    | SE |    |    |    | Totals |
|-------------|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|--------|
| 11N 16E 29  | NE | NW | SW | SE | NE | NW | SW | SE | NE | NW | SW | SE | NE | NW | SW | SE |        |
|             |    |    | .8 |    |    |    |    |    |    |    |    |    |    | .3 |    |    | 1.1    |
|             |    |    | X  |    |    |    |    |    |    |    |    |    |    | X  |    |    |        |

Total Acres: 1.1

**PLACE OF USE:** STOCKWATER

| Twp Rge Sec | NE |    |    |    | NW |    |    |    | SW |    |    |    | SE |    |    |    | Totals |
|-------------|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|--------|
| 11N 16E 29  | NE | NW | SW | SE | NE | NW | SW | SE | NE | NW | SW | SE | NE | NW | SW | SE |        |
|             |    |    | X  |    |    |    |    |    |    |    |    |    |    | X  |    |    |        |
|             |    |    | X  |    |    |    |    |    |    |    |    |    |    | X  |    |    |        |

Method of Determination: Field observation and Aerial photography

3. \_\_\_\_\_ Map Attached Showing Location(s) of point(s) of diversion and place(s) of use (required). Scale must be 1:24,000 or greater.  
 \_\_\_\_\_ Aerial Photo Attached (required for irrigation of 10+ acres).

4.

| <u>Well or Diversion ID No.*</u> | <u>Motor Make</u> | <u>Hp</u> | <u>Motor Serial No.</u> | <u>Pump Make</u> | <u>Pump Serial No. or Discharge Size</u> |
|----------------------------------|-------------------|-----------|-------------------------|------------------|------------------------------------------|
|                                  |                   | .75       |                         | Grundfos         |                                          |

**D. FLOW MEASUREMENTS**

Not required for permits with irrigation of less than five(5) acres or permits with the total combined diversion rate for all uses established in connection with the permit not exceeding twenty-four one hundredths (0.24) cubic feet per second according to new Beneficial Use Examination Rules Dated 3/29/2012.

**E. FLOW CALCULATIONS**

\_\_\_\_\_ Additional Computation Sheets Attached

Measured Method: None Taken

Theoretical yield:  $Q = \frac{8.8 \times (Hp) \times (Eff)}{H}$

Where: Hp = 0.75 Hp pump (per Applicant/Tait Johnson)

Eff = efficiency = 70% assumed

H = total head = pumping level + (2.31 x system pressure), assumed pumping level of 40 feet (per Well Driller's Report), assumed system pressure = 40 psi (standard pressure)

$$H = 40 + (40 \times 2.31) = 132.4$$

$$Q = \frac{8.8 \times .75 \times .70}{132.4} = 0.03489 = 0.04 \text{ cfs}$$

Theoretical yield calculation indicates the well is capable of pumping 0.04 cfs

**Recommend 0.04 cfs for this license****F. VOLUME CALCULATIONS**

1. Volume Calculations for Irrigation: 1.1 acres estimated and standard diversion allowance for the area is 3.0 AFA/ acre

$$V_{I.R.} = (\text{Acres Irrigated}) \times (\text{Irrigation Requirement}) = (1.1 \text{ acres}) \times (3.0 \text{ AFA per acre}) = 3.3 \text{ AFA}$$

$$V_{D.R.} = [\text{Diversion Rate (cfs)}] \times (\text{Days in Irrigation season}) \times 1.9835 = (0.03 \text{ cfs}) \times (214 \text{ days}) \times (1.9835) = 12.7 \text{ AF}$$

$$V = \text{Smaller of } V_{I.R.} \text{ and } V_{D.R.} = 3.3 \text{ AF}$$

2. Volume Calculations for Other Uses:

Stockwater = 6 head of horses @ 12 gpd = 72 gpd

72 gpd x 365 days / 325850 gallons per AF = 0.08 AF (use 0.1 AF)

Domestic use allows 0.6 AF (IDWR Standard) for in house use.

Total 3.3 + 0.1 + 0.6 = 4 AFA

**Recommend 4 AFA for this license**

**G. NARRATIVE/REMARKS/COMMENTS**

Application for permit 72-16601 was filed by Tait Johnson of November 30, 2000 seeking to appropriate a total of 0.12 cfs from a well for domestic, irrigation, and stockwater uses for a parcel within HES 583. This application is to supplement existing water rights to allow for a new home and irrigation when Burnt Creek is dry. The application for permit was amended on October 16, 2006 to correct the point of diversion, place of use, and to update the applicants address. The application was amended again per a letter received September 14, 2007 to reduce the number of acres to be irrigated, and to identify the place of use is within HES 583. On December 6 2007 Cheri Padilla/Palmer adjusted the usage under this permit from 0.12 cfs to 0.09 cfs since the applicant reduced irrigated acres from 2.2 to 1.1 and recommended the application for approval. Permit 72-16601 was approved on December 10, 2007 and proof of beneficial use was due on or before December 1, 2008. Proof of beneficial use was submitted by the applicant on December 26, 2007.

On February 23, 2015 while in the area performing another field exam with Jana Reeder, I also visited Mr. Johnson's property. Permit 72-16601 is for the addition of a second home and well to the property, so a separate water right is needed for the additional domestic use. During the field visit I observed irrigation lines in and around trees and plants for both homes. The lawn area in front of the two homes had an irrigation system in place. It was clear that an irrigation system is in place for the acreage behind the homes and has been used for horses. Permit 72-16601 was issued using a projected quarter, quarter line to identify the legal description of the proposed point of diversion. The actual legal description of the well is within HES 583. The location of the well was drilled south of where it was permitted in a different projected tract. However it is still within the legal description of HES 583. The license will reflect the well is located within HES 583 therefore no amendment is necessary.

The well consists of a ¾ hp Grundfos on demand variable speed pump. Water is only diverted when needed, there is no storage tank. The theoretical yield calculation indicates the well is capable of pumping 0.04 cfs. The license will be reduced from the permitted amount of 0.09 cfs to 0.04 cfs because of its capacity. Individual flow rates recommended as permitted.

Have conditions of permit approval been met? ☒ Yes ☐ No

**H. RECOMMENDATIONS****1. Recommended Amounts**

| <u>BENEFICIAL USE</u> | <u>PERIOD OF USE</u> | <u>DIVERSION RATE</u> | <u>ANNUAL VOLUME</u> |
|-----------------------|----------------------|-----------------------|----------------------|
| DOMESTIC              | 01/01 to 12/31       | 0.040 CFS             | 0.6 AF               |
| IRRIGATION            | 04/01 to 10/31       | 0.030 CFS             | 3.3 AF               |
| STOCKWATER            | 01/01 to 12/31       | 0.020 CFS             | 0.1 AF               |
| <u>Totals:</u>        |                      | 0.040 CFS             | 4.0 AF               |

**2. Recommended Amendments**

☐ Change P.D. as reflected above ☐ Add P.D. as reflected above ☒ None

☐ Change P.U. as reflected above ☐ Add P.U. as reflected above ☐ Other

**I. AUTHENTICATION**

Field Examiner's Name Benny Walker Date 2/3/16

Reviewer Douglas Jones Date 4/15/16



72-16601

Source: Esri, DigitalGlobe, GeoEye, I-cubed, USDA, USGS, AEX, Getmapping, Aerogrid, IGN, IGP, swisstopo, and the GIS User Community



72-16601

The USDA-FSA Aerial Photography Field office asks to be credited in derived products.

**Permit 72-16601**



**New home on the Left**

**Pasture behind homes**



**72-16601**

**Permit 72-16601**



**Well head**

**Irrigation system control boxes**



**72-16601**